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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/825,395

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Brian Schoner

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EXAMINER

VO, QUANG N

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/825,395	<b>Applicant(s)</b> SCHONER, BRIAN	
	<b>Examiner</b> QUANG N. VO	<b>Art Unit</b> 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 28-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-7, 10, 12-16, 19, 21-25 is/are rejected.
- 7) ☒ Claim(s) 2,8,9,11,17,18,20,26,27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 15 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

Newly submitted claims 28-35 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons:

I. Species of the embodiment disclosed in paragraph 21, in particular the invention that does not require a luminance-offset function for patentability (US 2005/0169522) (claims 1-27) (note: the term may is being interpreted as an alternative).

II. Species of the embodiment disclosed in paragraph 21, in particular the invention that does require a luminance-offset function for patentability (US 2005/0169522) (claims 28-35).

The species are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species. In addition, these species are not obvious variants of each other.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 28-35 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

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Applicant argues that Matsuoka does not disclose a two dimensional lookup table.

In reply, Matsuoka also discloses a two dimensional lookup table (e.g., graphs of figures 21, 22, and 23 represent as two dimensional lookup tables, column 21, lines 26-35).

Applicant argues that Matsuoka does not disclose interpolating the mapping information for the nearest table entries to obtain color information for an output color.

In reply, Matsuoka discloses interpolating the mapping information between RGB data input and CMYK data to be output using LUT to obtain color information for an output color corresponding to the input color in embodiment 9 (column 20, lines 39-49) and determining mapping information for table entries nearest to an input color (e.g., mapping color components of lightness, chromaticity to the nearest input color M, column 28, lines 14-67).

With regard to claim 10, Applicant argues that Matsuoka does not disclose at least one processor capable of determining mapping information for table entries nearest to an input color.

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In reply, Matsuoka discloses at least one processor capable of determining mapping information (e.g., CPU and color signal converter block 208, figure 1) and determining mapping information for table entries nearest to an input color (e.g., mapping color components of lightness, chromaticity to the nearest input color M, column 28, lines 14-67).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-7, 10, 12-16, 19, 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuoka (US 7,116,441).

With regard to claim 1, Matsuoka discloses a method that maps any input color from an image to an output color, the method using a two-dimensional lookup table (e.g., nonlinear mapping of the lightness and chromaticity components (two-dimension) in the gamut mapping unit, column 27, lines 58-60); e.g., graphs of figures 21, 22, and 23 represent as two dimensional lookup tables, column 21, lines 26-35) that contains mapping for a portion of the colors of the image and using color information associated with an input color from the image (e.g., mapping of the lightness component is implement by one input/output function; mapping of the chromacity component is implemented by further separating the chromaticity component into hue and saturation

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components, column 27, line 58 – column 28, line 12); determining mapping information for table entries nearest to an input color (e.g., mapping color components of lightness, chromaticity to the nearest input color M, column 28, lines 14-67).

Matsuoka does not disclose interpolating the mapping information for the nearest table entries to obtain color information for an output color corresponding to the input color in embodiment 11.

Since Matsuoka discloses interpolating the mapping information between RGB data input and CMYK data to be output using LUT to obtain color information for an output color corresponding to the input color in embodiment 9 (column 20, lines 39-49) and determining mapping information for table entries nearest to an input color (e.g., mapping color components of lightness, chromaticity to the nearest input color M, column 28, lines 14-67).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have recognized Matsuoka is having determining mapping information for table entries nearest to an input color; and interpolating the mapping information for the nearest table entries to obtain color information for an output color corresponding to the input color, or at least obvious to provide functional part for performing mapping information for table entries nearest to an input color; and interpolating the mapping information for the nearest table entries to obtain color information for an output color corresponding to the input color.

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With regard to claim 3, Matsuoka discloses wherein the mapping information of a table entry comprises color information associated with the table entry and a mapping condition associated with the table entry (column 1, lines 9-14).

With regard to claim 4, Matsuoka discloses wherein the mapping condition indicates the color information associated with the table entry is to be used when the mapping condition is asserted (e.g., look-up table, RGB, CMYK, column 20, lines 39-49).

With regard to claim 5, Matsuoka discloses wherein the mapping condition indicates the color information of the input color is to be used when the mapping condition is not asserted (e.g., interpolator computes CMYK data based on RGB data input, column 20, lines 39-49).

With regard to claim 6, Matsuoka discloses wherein the color information of the input color is output without performing any mapping when the mapping condition is not asserted for all the nearest table entries (column 6, line 63 – column 7, line 3).

With regard to claim 7, Matsuoka discloses wherein the brightness of the input color is mapped to an output brightness using brightness information of the table entries when the color information of the input color is output without performing any mapping (e.g., monitor gamut, printer gamut, look-up table, column 20, line 53 – column 21, line 7).

Referring to claim 10:

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Claim 10 is the system claim corresponding with method steps in claim 1 with operation corresponding directly to the steps in method of claim 1. Therefore claim 10 is rejected as set forth above for claim 1.

Referring to claim 12:

Claim 12 is the system claim corresponding with method steps in claim 3 with operation corresponding directly to the steps in method of claim 3. Therefore claim 12 is rejected as set forth above for claim 3.

Referring to claim 13:

Claim 13 is the system claim corresponding with method steps in claim 4 with operation corresponding directly to the steps in method of claim 4. Therefore claim 13 is rejected as set forth above for claim 4.

Referring to claim 14:

Claim 14 is the system claim corresponding with method steps in claim 5 with operation corresponding directly to the steps in method of claim 5. Therefore claim 14 is rejected as set forth above for claim 5.

Referring to claim 15:

Claim 15 is the system claim corresponding with method steps in claim 6 with operation corresponding directly to the steps in method of claim 6. Therefore claim 15 is rejected as set forth above for claim 6.

Referring to claim 16:



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Claim 16 is the system claim corresponding with method steps in claim 7 with operation corresponding directly to the steps in method of claim 7. Therefore claim 16 is rejected as set forth above for claim 7.

Referring to claim 19:

Claim 19 is the system claim corresponding with method steps in claim 1 with operation corresponding directly to the steps in method of claim 1. Therefore claim 19 is rejected as set forth above for claim 1.

Referring to claim 21:

Claim 21 is the system claim corresponding with method steps in claim 3 with operation corresponding directly to the steps in method of claim 3. Therefore claim 21 is rejected as set forth above for claim 3.

Referring to claim 22:

Claim 22 is the system claim corresponding with method steps in claim 4 with operation corresponding directly to the steps in method of claim 4. Therefore claim 22 is rejected as set forth above for claim 4.

Referring to claim 23:

Claim 23 is the system claim corresponding with method steps in claim 5 with operation corresponding directly to the steps in method of claim 5. Therefore claim 23 is rejected as set forth above for claim 5.

Referring to claim 24:

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Claim 24 is the system claim corresponding with method steps in claim 6 with operation corresponding directly to the steps in method of claim 6. Therefore claim 24 is rejected as set forth above for claim 6.

Referring to claim 25:

Claim 25 is the system claim corresponding with method steps in claim 7 with operation corresponding directly to the steps in method of claim 7. Therefore claim 25 is rejected as set forth above for claim 7.

***Allowable Subject Matter***

Claims 2, 8, 9, 11, 17, 18, 20, 26 and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 2, the method of claim 1, wherein interpolating said mapping information for the nearest table entries comprises: determining mapping information of a first table entry corresponding to a color represented by the lookup table and closest to the input color; determining mapping information of a second table entry a table entry away from the first table entry in a first direction in the lookup table; determining mapping information of a third table entry a table entry away from the first table entry in a second direction in the lookup table; determining mapping information of a fourth table entry a table entry away from the third table entry in a first direction in the lookup table; and

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wherein the input color is located between the nearest table entries. Matsuoka (US 7,116,441), teaches a similar method for mapping information, either singularly or in combination with cited references, fail to anticipate or render the above underline limitations obvious (to use in combination with other claimed limitations).

Claims 11 and 20 are similar subject matter as claim 2. Therefore, claims 11 and 20 have allowable subject matter set forth above as claim 2. Claims 8 and 9 depend on claim 2; claims 17 and 18 depend on 11; claims 26 and 27 depend on claim 20.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang N. Vo whose telephone number is 5712701121. The examiner can normally be reached on 7:30AM-5:00PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Y. Poon can be reached on 5712727440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quang N Vo/  
Examiner, Art Unit 2625